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ABSTRACT

The Special Education Distance Learning Consortium in West Virginia has developed a program offering core special education courses to teachers unable to attend courses at the campus sites of the state's three graduate teacher preparation programs. The three courses which constitute the core are: "Introduction to Exceptional Children and Adults"; "General Special Education Programming"; and "Educational Assessment for Exceptional Children and Adults." The core courses were reconceptualized for satellite delivery and have involved 13 to 17 sites and 400 registrants. Two-way telephone communication allows students to call in and ask questions. Site facilitators receive special training. Program evaluation found that no student completing a course received less than a C, that students rated the faculty highly, and that students expressed primarily positive attitudes in a follow-up telephone survey. Suggestions for similar programs include utilizing the ease of peer review provided by the delivery mechanism, taping to improve instructional presentations, and cooperating with similar institutions. Includes four references. (DB)

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# Satellite Distance Courses: A Collaborative Effort for Meeting Demands for Special Education Teachers

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Paper presented at the Annual Convention of the Council for Exceptional Children (69th, Atlanta, GA, April 1-5, 1991).

A consortium state project developed by the special education faculty members of the three major graduate institutions of higher education was funded in January 1988 in response to the request for increased teacher training in special education by the West Virginia Department of Education. Previously these faculties had worked together on a study of special education teacher certification alternatives which culminated in a report to a joint meeting of the West Virginia Board of Regents and the West Virginia Board of Education. The report identified a common certification core of courses for graduate special education teacher certification in the areas of learning disabilities, behavior disorders, and mild mental impairments. The core was developed to facilitate coursework for special education teachers on permit, to assist in the standardization of the certification process across the state, and to discourage students from "shopping around" for the perceived easiest track towards special education certification. The report also concluded that a multi-categorical certification would be a less-desirable alternative than implementing a common certification core with nine additional hours required for each endoresement. By agreement with the West Virginia Department of Education this common core became the basis for the learning disability, behavior disorder, and mild mental retardation program refiling in 1990. The three courses which constitute the core are Introduction to Exceptional Children and Adults, General Special Education Programming, and Educational Assessment for Exceptional Children and Adults.

A natural outgrowth of the development of the core concept was to use the already existing satellite communication system in the state. With the common core as the base, the graduate institutions developed a grant proposal requesting funds from the West Virginia Department of Education to deliver the common core courses by satellite across the entire state. At the time of the proposal, it was estimated that approximately 1,000 practicing special education teachers in West Virginia were doing so without proper certification (Supply and Demand of Educational Personnel in West Virginia, 1988). Similar situations have been reported in other states, particularly those rural (Helge, 1984; Garner, Rudolph & Della-Piana, 1984). Due to the extremely difficult geographic terrain of West Virginia and the limited number of graduate institutions in the state, the three college faculties felt that offering coursework through satellite delivery was a very viable approach. One concern expressed by a number of faculty in the consortium was the assurance of maintaining the quality of instruction. Milheim (1989) notes the use of satellites is still quite new in terms of education but is becoming recognized for its ability to provide instruction to learners at great distances from their institutions.

**Satellite Course Delivery**

The consortium agreed to develop and deliver the three core courses in a three phase process. Phase I included the development or refinement of course syllabi acceptable to each of the institutions, training of staff and development of materials. Phase I was concluded in the Summer of 1989,

with teaching teams established, training workshops completed, and instructional materials prepared. All courses had been reconceptualized for distance delivery, including the development of on-site teaching activities as well as presentation outlines. During this phase, it was also determined that over 150 satellite dishes were currently in operation throughout the school systems in West Virginia. For an area to participate they would only need a satellite dish, telephone facilities, and a facilitator.

Beginning in the Fall of 1989, Phase II required the delivery of the first two courses. The first course selected for presentation by the satellite system was the basic introduction course Survey of Exceptional Children and Adults. It was decided that the high content nature of the course lent itself more naturally to the media of television. Eighty-one students enrolled at 14 sites. For this course the site facilitators' major responsibility was readying the site location and proctoring exams. Faculty workshops were held twice during the semester where tape samples were evaluated and teaching improvement strategies developed. Two consultants from Utah, a special educator and a media specialist, conducted these workshops. All special education faculty were invited to attend. This formative evaluation contributed to the improvement of other courses being prepared as well as the Introduction course.

Thirteen sites were used in offering the second core course, General Special Education Programming, in the Spring of 1990. A total of 127 students were registered. An equal amount of sessions originated from each of the television studios at each college. Two of the fifteen sessions involved

shared satellite broadcasting segments from each of the stations on the same night. Facilitators became a more integral part of the teaching team for this course. Their duties included the guiding of hands-on activities which followed each of the broadcasts as well as preparing the site location and monitoring tests. For this reason, a training session was held for the facilitators prior to the course offering. At that time, the facilitators also received a manual which provided their responsibilities for each of the 15 course sessions. A highlight of this course was a broadcasting of outstanding learning packets developed and presented by students and shared through satellite to their peers.

Both courses had two-way telephone communication so students at any of the sites could call in and ask questions. There was a waiting period, however, if more than two calls were being received.

The third course, Educational Assessment of Exceptional Children and Adults, was a newly developed course for the common core, and is part of Phase III. As with the General Special Education Programming course, the three faculty agreed to share in lecture presentation as well as origination sites. The course is in progress as of this writing (Spring 1991), with a total of 192 students registered at 17 different sites. Each site facilitator is a professional qualified to administer and interpret the tests being presented. Exams have been prepared to be taken by computer, allowing immediate feedback and retesting options. Evaluative data is not yet available for this core course.

**Evaluation**

The effectiveness of any course can be measured in several different ways. One way is the number of students who registered and completed the courses. As can be noted, the number of students and sites have steadily increased as the consortium advanced in its three phase process. Another measure of effectiveness could be considered course grades. No student in either course completed received less than a C.

Student evaluation of faculty was done using an instrument which measured all the faculty together for each course. Table 1 is a summary of the completed Student Evaluation of Faculty Forms for both courses. The overall ratings are all in the excellent range and compared very favorably to the ratings of faculty who teach courses in a traditional manner.

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Insert Table 1 about here

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A follow-up telephone survey of students was also conducted. A sample of 42 students was polled after receiving their grades to determine their evaluations of the instructional delivery system. Most often expressed was the saving of time and travel expense in their decision to take a distance learning option. Naturally students' perceptions varied, with students in urban sites seemingly somewhat less positive than students from rural settings.

Each of the courses delivered on the Satellite Network cost approximately $12,000 to produce and deliver. Faculty replacement costs and salaries for facilitators cost another $12,000. The cost of administration and support service was $4,000 per course. Training and staff development was approximately $500 per course. Indirect charges were assessed at 8%. Using these factors, the average cost could be reasonably estimated at $31,300. Cost avoidance estimates for the two completed classes in terms of time not spent traveling at $10.00 per hour and $.20 per mile car expense would be in excess of $150,000. The increasing enrollment available through a satellite delivery course, although not determined yet in this project, would appear to add to the economic value of distance learning.

**Implications for Teacher Trainers**

Entering into a telecommunication experience can produce a wide variety of discoveries. Like all delivery systems, satellite distance courses are not perfect, and most teacher trainers will come away from the experience with the feeling that they could do a better job the next time. To perhaps minimize the trial and error aspects of the process, the following suggestions are offered as a result of the West Virginia collaborative teacher training effort:

1. Peer review is readily available. Any dean, superintendent, or fellow professor can "tune-in" to observe your teaching style and course content.

2. Visual feedback is excellent. By having the studio tape the presentation, the instructor can review the presentation at home and modify it as needed.
3. When the presentation is effective, it provides excellent public relations for your university, college, and special education programs.
4. It encourages cooperation between sister institutions through cross-listing and exchanged cross credit.
5. The experience can energize the existing television resources of your institution, particularly if they are not being utilized to their full capacity.
6. Due to the open access nature of satellite courses, the professor often is better prepared. It encourages her/him to reorganize the course s/he has been meaning to update for several years.
7. The format can impact on staff needs. If one professor is offering a required course across the state for all institutions of higher education, this can release other staff to conduct activities that normally would not be possible. The process could also reduce the need for part-time faculty which are sometimes used for introductory or core level courses.

**Summary**

The Special Education Distance Learning Consortium in West Virginia was organized initially for the purpose of developing common certification core courses for preparing special education teachers. While the consortium has involved undergraduate programs in the development and evaluation of curriculum, the primary members are the three graduate

teacher preparation programs. Three years prior to the delivery of the first satellite special education course, the faculty began work on developing a sequence of certification courses which were common to the three institutions and provided a "core" for the disability areas of behavior disorders, learning disabilities, and mild mental impairment. While having a common core is not essential for distance learning, the consolidated approach certainly was more cost effective than if each institution offered its own courses.

Distance learning seems to provide an effective alternative for training the inservice educator at, or near, their work place. Feedback from the students about the satellite system and the courses offered to date supports that learning is as great as in traditional courses. While some students would prefer to have the instructor in their classroom, their distance from campus and personal commitments make travel to an instructor's location unrealistic. Through the satellite delivery system of special education courses, public school teachers saved thousands of dollars in travel expense and lost time. Providing continuing teacher education in the work place also is a key element to recruitment and retention. As enrollment in satellite courses increase, the economic value of such a delivery system also increases. This project demonstrates that the delivery of quality teacher training programs for special education is possible through satellite distance learning. Plans are to develop new offerings and expand the audience to regular education initiatives and administration.

**TABLE 1**
**Student Evaluation of Faculty for Satellite Courses**

X Introduction Course (N 81) $X^1$ General Programming Course (N 128)

| Descriptors | Excellent 10 \| 9 8 7 | Average \| 6 5 4 | Poor \| 3 2 1 |
|---|---|---|---|
| Knowledge of Subject | | X = 9.27 | $X^1$ = 8.33 |
| Preparation and Organization of Class | | X = 9.20 | $X^1$ = 8.08 |
| Ability to Motivate Students | | X = 8.33 | $X^1$ = 7.37 |
| Attitude Towards Students | | X = 9.02 | $X^1$ = 8.02 |
| Student Involvement | | X = 7.25 | $X^1$ = 7.43 |
| Ability to Communication | | X = 8.94 | $X^1$ = 7.66 |
| Enthusiasm | | X = 9.12 | $X^1$ = 7.92 |
| Assistance to Students | | X = 8.25 | $X^1$ = 7.66 |
| Suitability of Assignments | | X = 8.79 | $X^1$ = 7.58 |
| Basis for Testing and Grading | | X = 8.46 | $X^1$ = 7.55 |
| Overall Rating of Instructor | | X = 8.85 | $X^1$ = 7.67 |

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